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to have been voracious, as would appear also from the structure of the teeth; but the points in which it differs from any one animal, and resembles others belonging to classes extremely remote, occasion the author to view it, with the singular productions of New South Wales, as one of the connecting links in the creation, formed for the purpose of preventing any void in the chain of imperceptible gradations, from one extreme of animated beings to the other.

*On an easier Mode of procuring Potassium than that which is now adopted.* By Smithson Tennant, Esq. F.R.S. Read June 23, 1814. [*Phil. Trans.* 1814, p. 578.]

The process originally discovered and described by Messrs. Gay-Lussac and Thenard for obtaining potassium by means of iron, requires that the iron should at first be intensely heated, and afterwards that the alkali should be applied to it in the heated state. For this purpose a gun-barrel is required of such a length as to pass through a furnace purposely constructed, having at its extremity a second short portion of barrel neatly fitted to it by grinding, for the purpose of containing the alkali; and from which it may be made to flow by means of a separate fire, to be applied by the attendant operator at such a stage of the process, and at such a rate, as is judged to be most advantageous.

Since in this method, though the alkali is, in fact, soon mixed with the iron, the process nevertheless requires the heat to be continued for nearly an hour, the author conceived that nearly the same effect might be produced merely by mixing the same ingredients previously, and distilling them in the following simple apparatus.

A straight gun-barrel, coated well at its lower part with Stourbridge clay, is filled to about one half its length with a mixture of iron turnings and potash. Into the upper half of this barrel is inserted a smaller and thinner tube of iron, contracted at its lower extremity to a small orifice, sufficient to admit the vapour of potassium to pass, and of such a length that its upper extremity may project a little beyond the end of the gun-barrel; and then both are covered at the same time by a cap, which fits the gun-barrel sufficiently to be closed with cement. In the top of this cap is a cork, with a tube of safety for passage of gas that escapes during the operation.

The advantage of the inner tube, in which the potassium is received, consists not merely in the facility with which the product is withdrawn, but in preventing an admixture of potash, with which it is otherwise liable to be contaminated.

*On the influence of the Nerves upon the Action of the Arteries.* By Sir Everard Home, Bart. F.R.S. Read June 30, 1814. [*Phil. Trans.* 1814, p. 583.]

The object of this paper is to show that the nerves which accompany the arteries regulate their actions, and occasion different pro-